

What is claimed is;

1. A radiation image sensor comprising
a radiation detector layer formed of radiation detector
particles which generate electric charges upon exposure to
5 recording radiation and are dispersed in a polymer, and
an electric signal detector layer formed of detector
elements each of which is formed on the surface of a plastic
substrate for each pixel to detect the electric charges
generated at the corresponding pixel in the radiation detector
10 layer,

wherein the radiation detector layer and the electric
signal detector layer are laminated one on the other.

2. A radiation image sensor as defined in Claim 1 in
which the radiation detector particles are of HgI_2 , PbI_2 ,
15 $\text{Cd}_{1-x}\text{Zn}_x\text{Te}$, TlBr , PbO , Pb_2O_3 , BiI_3 or BiGeO .

3. A radiation image sensor as defined in Claim 1 in
which the polymer comprises polyester, acrylic polymer or
nylon polymer.

4. A radiation image sensor as defined in Claim 1 in
20 which the radiation detector layer and the electric signal
detector layer are laminated one on the other by way of
conductive resin film partitioned for respective pixels.

5. A radiation image sensor as defined in Claim 4 in
which the radiation detector particles are of HgI_2 , PbI_2 ,
25 $\text{Cd}_{1-x}\text{Zn}_x\text{Te}$, TlBr , PbO , Pb_2O_3 , BiI_3 or BiGeO .

6. A radiation image sensor as defined in Claim 4 in

which the polymer comprises polyester, acrylic polymer or nylon polymer.

7. A method of producing a radiation image sensor defined in Claim 1 comprising the step of

5 forming the radiation detector layer by coating with dispersion of the radiation detector particles in polymer the side of the electric signal detector layer on which the detector elements are formed.

8. A method of producing a radiation image sensor as
10 defined in Claim 4 comprising the steps of

 forming conductive resin film on each of the detector elements on the electric signal detector layer and

 laminating the electric signal detector layer provided with conductive resin film on each of the detector elements
15 on the radiation detector layer.